2005 BRULE FISHERIES UPDATE

PRESENT FISHERY: The Brule River continues to provide an exceptional wild anadromous fishery that is second to none along the U.S. portion of Lake Superior. Exceptional water quality, a stable watershed and vast diversity in habitat has contributed to maintaining this healthy fishery. Most anadromous fisheries along the western portion of the lake have experienced dramatic declines in the past 15 or so years. Changes in land use within watersheds and most noticeably changes in the Lake Superior fishery have had the largest impact on anadromous populations. Healthier native populations of lake trout, whitefish and lake herring along with reduced abundance of near shore forage, have reduced survival rates of young salmonids (smolts) during their first year in the lake. The Brule has not been exempt to the changing lake environment, however, attributes stated previously have resulted in less noticeable declines. Its wild fishery is reliant on natural reproduction, which is influenced by climatic conditions within the watershed (i.e.; flood events, water temperatures), but not to the degree the other tributaries experience. Conservative regulations and habitat improvement that included gravel additions in the upper river have helped stabilize year-class strengths of all salmonids.

Steelhead: remain the most stable segment of the fishery and are helped by a population that is represented by many life histories of many year classes. One poor year-class doesn't affect run size, as does coho salmon, where nearly the entire run is made up of one age group. Nearly ideal summer stream conditions since "2000" should have provided excellent hatching and rearing conditions for young steelhead during the past five years. These year-classes should have a positive influence on the fishery for the next half-dozen years. A large year class young of lake herring during the summer of "2003" provided favorable growing conditions in Lake Superior resulting in exceptional growth rates and likely improved survival of juvenile salmonids. The summer of "2004" being very cold, probably had a negative influence on smolt survival. This was apparent when the number of jacks returning was lower than expected, although they were near average size. Hopefully the cold season just delayed maturity and the return of maiden four year-old fish in the fall of "2005" won't be as bad as this indicates.

Coho Salmon: have definitely been on a downward trend the past ten years, with the changing fishery in Lake Superior highly influencing this decline. The past three seasons combined for the lowest consecutive total since we began observations at the lamprey barrier/fishway. As stated earlier, coho-adult runs are made up of for the most part, one year-class, so size of the run can be highly impacted by one event that limits survival during a portion of their life. This happened in summer of "1999", when a large rainfall event flooded the upper river for nearly a week, creating a stressful environment from low dissolved oxygen levels and likely elevated nitrogen concentrations. High mortality of this year-class was apparent. Fry observations on upper river tributaries in the spring of "2002" revealed poorer than average recruitment and may have contributed to the poor return last fall. The female portion (# of eggs) of these recent poor returns may be low enough to limit the potential size of year-classes produced and will likely have an effect on the future fishery. The fishery can rebound, but it will take several generations and favorable conditions in both the stream and the lake for each year-class to do so.

Chinook Salmon: never built a large population in the Brule, and like coho, has declined noticeably. Their numbers are down lake wide, so the down turn in the Brule is not surprising. Unfavorable lake environment has likely contributed to their decline, since they migrate to the lake at such a small size (3"-5").

Brown Trout: remain very healthy even though the run during the fall of "2004" was below recent years. The flood during the summer of "1999" undoubtedly impacted fingerling survival, and as a result, the number of four year-old fish, which usually makes up the largest percentage of the run, was diminished.

SPRING FISHING SEASON: Each year we receive numerous complaints of people fishing steelhead on the spawning gravels. Many anglers believe this isn't ethical, harms the fish, impacts reproduction and warrants closing the spring season. They believe doing so will improve steelhead numbers. One could argue it isn't ethical, but closing particular sections of the river or closing the season entirely will have an insignificant impact on the fishery. Targeted fish make up an extremely small portion of the entire spawning populations and there is no scientific evidence proving spawning is impaired. Our experience indicates stream flows following fry emergence has the greatest negative impact on reproduction within the lower portion of the river. Observations this past summer indicated very high densities of fingerlings, which were positively influenced by the lack of precipitation. It would be best not to reduce angler opportunity if it wouldn't help the fishery. We encourage careful handling of all steelhead, especially ripe females, so there is no unnecessary loss of eggs. This is a very special fishery so please respect it and the fish.